

ABSTRACT OF THE DISCLOSURE

It is an object of the invention to provide a torsional vibration suppressing apparatus further including an inertia control portion capable of suppressing a feeble vibration in a torsional vibration suppressing control portion.

The invention includes inertia control means (29) for calculating and outputting an inertia control signal  $T_{MC}$  from an electric motor acceleration torque signal  $T_{MFB}$  obtained by multiplying a signal acquired by differentiating an electric motor mean speed signal  $N_{MVG}$  by an inertia time constant  $\tau_M$  of the electric motor portion, electric motor acceleration torque control means (28) for calculating a torque command compensation signal  $T_{REL}$  from a deviation signal of a signal  $T_{RFAX}$  and obtained by decreasing  $T_{MC}$  from a torque command signal  $T_{RFA}$  and the electric motor acceleration torque signal  $T_{MFB}$ , and electric motor torque control means for controlling a current of the electric motor in order to obtain an electric motor torque in accordance with a torque command  $T_{REM}$  to be a sum of  $T_{RFA}$  and  $T_{REL}$ .